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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,320	02/13/2001	Bernhard H. van Lengerich	BVL-102A	9819

7590
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09/04/2008

EXAMINER

ROBERTS, LEZAH

ART UNIT	PAPER NUMBER
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1612

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/782,320	Applicant(s) VAN LINGERICH, BERNHARD H.	
	Examiner LEZAH W. ROBERTS	Art Unit 1612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25,28-31,34,35,37-40,42,46,52,53,55-59,61,62,64-67,69,70,73,75,79,81-85,91-93,95-97,101,103 and 105 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 25,28-31,34,35,37-40,42,46,52,53,55-59,61,62,64-67,69,70,73,75,79,81-85,91-93,95-97,101,103 and 105.

DETAILED ACTION

This Office Action is in response to the Appeal Brief filed January 12, 2007. All previous rejections have been withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims

Claim Rejections - 35 USC § 112 - Indefiniteness

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 25, 27-31, 34, 35, 37, 38, 42, 46, 52-59, 61, 62, 64-67, 69, 70, 73, 75, 79, 82, 83, 91-93 and 95-97 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite the limitation "at least about." The term "at least" delineates only numerical values more than the recited value where the term "about" may be less than or more than the recited value. Because of the conflict of terms, it is unclear which term is limiting. See also MPEP 2173.05(b) (citing *Amgen v. Chugai*, 18 USPQ2d 1016 (Fed. Cir. 1991), in which the phrase "at least about" was held indefinite).

2) The term "substantially" in claims 25, 37, 52, 64 and 83 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim,

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the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It cannot be definitely determined the degree of homogeneity is encompassed by the "substantially homogeneous". It cannot be definitely determined the degree encompassed by "substantially non-expanded, substantially non-cellular structure".

Claim Rejections - 35 USC § 102 - Anticipation (New Rejection)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 25, 28-31, 34, 35, 37-40, 46, 52, 55-59, 61, 62, 64-67, 73, 75, 79, 81, 83 91, 92, 95-97, 101, 103 and 105 are rejected under 35 U.S.C. 102(b) as being anticipated by Grabowski et al. (US 6,290,990).

Grabowski et al. disclose slow-release matrix pellets. The matrix is plasticized by lipophilic substances and is composed of a polymer which is insoluble in water and gastrointestinal fluids. The matrix may also comprise a polymer which forms a highly viscous solution (hydrocolloid) or at least swells (col. 2, lines 54-65). The particles may also be coated. The coating includes film forming polymers such as hydroxy methyl cellulose (col. 3, lines 36-47). The actives that may be used in the compositions encompass those of the instant claim 46 and 75. The matrix comprises, at least one

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biologically active compound ("active substance"; preferably in human or veterinary medicine, but also vitamins and systemic insecticides, fungicides and herbicides) in an amount of 0.1-87 % by weight. It also comprises at least one natural, semi-synthetic or synthetic polymer which is insoluble in water and gastrointestinal fluids, in an amount of 5-50% by weight. These include ethyl cellulose, cellulose ethers, insoluble polysaccharides and microcrystalline cellulose. Additionally, 5-45% by weight of at least one water-insoluble lipophilic component with plasticizer properties for polymer b) and lubricant properties is included. These include stearic acid, polyethylene oxides, polypropylene oxides and wax. Also included ranging from 3-40% by weight is at least one natural or semi-synthetic hydrophilic polymer which in water or gastrointestinal fluids forms highly viscous colloidal solutions or gels or at least swells (abbreviated to "gel former" herein). These include hydroxyalkyl celluloses, alginic acids, gums pectins, and carboxymethyl celluloses. Water insoluble polymers include polyvinyl pyrrolidone, cross-linked starches and starch derivatives. The composition includes auxiliaries at concentrations ranging from 0-50% by weight. The pellets may be compressed into tablets or packed into capsules. Auxiliaries include plasticizers such as polyethylene glycols, polypropylene glycols and glycerol ranging from 0.5 to 15% of the total weight of the pellets (cols. 3-5). The pellets are spherical shaped and have diameters ranging from 0.5-4 mm. In regards to claim 35, the pellets of the reference are spheres therefore the length to diameter ratio is 1.

Claim Rejections - 35 USC § 103 – Obviousness (New Rejection)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1) Claims 42, 53, 69, 70 and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabowski et al. (US 6,290,990) in view of Seppala et al (US 6,011,092).

Grabowski et al. is discussed above and differ from the instant claims insofar as it does not disclose the compositions comprise semolina in the plasticized matrix.

Seppala et al. disclose thermally plasticized compositions comprising starch. The compositions are used to controllably release fertilizers and medicines. The starches include those derived from wheat. The starch may be prepared from a natural starch by gelatinization, or a starch derivative prepared by oxidation, hydrolysis, cross-linking, cationization, etherification and esterification (col. 9, lines 52-63). Considerable advantages are obtained by the present invention. Thus, the polymer composition

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according to the invention, which contains a starch-based component and a chemically reacted thermoplastic polyester component, is thermoplastic and homogeneous; it has good mechanical properties and good water resistance. The polymer composition is mainly formed by raw materials which are derived from renewable natural resources and which are biodegradable/compostable (col. 7, lines 27-45). The compositions may also comprise plasticizers, fillers and reinforcing agents. The reference differs from the instant claims insofar as it does not disclose the compositions are discrete, solid particles or the amount of plasticizer in the matrix.

It would have been obvious to one of ordinary skill in the art to have used starch in the plasticized matrix of Grabowski et al. motivated by the desire to produce a matrix that was homogeneous; has good mechanical properties and good water resistance and controllably releases fertilizers and medicines as disclosed by Seppala et al.

2) Claims 82, 85 and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabowski et al. (US 6,290,990) in view of Seppala et al (US 6,011,092) as in claims 42, 53, 69, 70 and 84 above in further view of Andersch et al. (US 5,804,208).

Grabowski et al. and Seppala et al. are discussed above and differ from the instant claims insofar as they do not disclose the active agent is a microorganism.

Andersch et al. disclose granules comprising semolina as a carrier for microorganisms suitable for controlling pests (see Abstract). The semolina particles are close to globular shape with a mean diameter of 0.05 to 3 mm (col. 2, lines 54-67).

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Polyalcohols and antioxidants protect the microorganisms from drying out too much.

The microorganism may be prepared in an aqueous solution. The granules according to the invention are stored in closed containers under dry conditions. The compositions according to the invention can also be used as a mixture with other known pesticides such as insecticides, acaricides, nematocides, protective agents against ingestion by birds, plant nutrients, herbicides and soil structure enhancers (col. 9, lines 47-50). The pesticides also exhibit a surprisingly high activity for the amount of microorganism used, high storage stability and very simple handling (col. 4, lines 24-30). The reference differs from the instant claims insofar as it does not disclose the granules are a plasticized matrix.

It would have been obvious to use the granules comprising microorganisms as the pesticides used in the combined compositions of the Grabowski et al. and Seppala et al. motivated the desire to use a pesticide with a high activity, high storage stability and very simple handling, as disclosed Andersch et al.

No claims allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEZAH W. ROBERTS whose telephone number is (571)272-1071. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick F. Krass can be reached on 571-272-0580. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lezah W Roberts/
Examiner, Art Unit 1612

/Frederick Krass/
Supervisory Patent Examiner, Art Unit 1612